



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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| <b>(51) International Patent Classification <sup>6</sup> :</b><br><b>A61K 47/48, C12Q 1/68, G01N 33/53,</b><br><b>A61K 9/127</b>   | <b>A1</b> | <b>(11) International Publication Number:</b> <b>WO 96/25952</b><br><b>(43) International Publication Date:</b> 29 August 1996 (29.08.96)   |
| <b>(21) International Application Number:</b> PCT/GB96/00380<br><b>(22) International Filing Date:</b> 21 February 1996 (21.02.96)<br><br><b>(30) Priority Data:</b><br>9503486.4                      22 February 1995 (22.02.95)                      GB<br><br><b>(71) Applicant (for all designated States except US):</b> THE SECRETARY OF STATE FOR DEFENCE [GB/GB]; Defence Evaluation & Research Agency, Dra Farnborough, Hampshire GU14 6TD (GB).<br><br><b>(72) Inventors; and</b><br><b>(75) Inventors/Applicants (for US only):</b> TITBALL, Richard, William [GB/GB]; C.B.D.E, Porton Down, Salisbury, Wiltshire SP4 0JQ (GB). CARR, Francis, Joseph [GB/GB]; Eclagen Limited, Marischal College, Broad Street, Aberdeen AB9 1AS (GB).<br><br><b>(74) Agent:</b> BOWDERY, Anthony, Oliver; Defence Evaluation & Research Agency, Intellectual Property Dept., R69 Building, Dra Farnborough, Hampshire GU14 6TD (GB). |           | <b>(81) Designated States:</b> AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT, UA, UG, US, UZ, VN, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).<br><br><b>Published</b><br><i>With international search report.</i><br><i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i> |
| <b>(54) Title:</b> PHARMACEUTICALS AND ASSAYS USING ENZYME SUBUNITS  |           |   |
| <b>(57) Abstract</b><br><br>A method of releasing an agent (e.g. a chemotherapeutic) under predetermined conditions comprising the steps of protecting the agent within a lipid structure (e.g. a liposome), causing lipase activity to be constituted by combining two or more components (e.g. recombinant N- or C-terminal <i>Clostridium perfringens</i> alpha-toxin fragments), one of these components being conjugated to a targeting molecule (e.g. an antibody) which binds to a target (e.g. a tumour antigen) under the predetermined conditions. The lipid structure is then exposed to the constituted lipase activity such as to release the agent. Also disclosed are materials and kits for use in the method.   |           |   |